Amendments to the claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A method of treating a human with a joint disease involving cartilage, which method comprises:

obtaining ~~an~~ electronic image data of said joint, ~~wherein said image includes both normal and diseased cartilage tissue~~;

electronically evaluating said image data to obtain information about the three-dimensional geometry of the joint, wherein electronically evaluating includes determining or extracting three or more surface points on at least one of a cartilage or subchondral bone surface, the surface points being non-coplanar ~~comprising volume, area, thickness, curvature, geometry, biochemical contents, signal intensity or relaxation time of said normal or diseased tissue~~; and

~~selecting~~ determining a therapy based on said information.

2. (Cancelled)

3. (Currently Amended) The method of claim 1, wherein said electronic image data provides information on the volume, thickness, shape, or curvature of cartilage. ~~said normal and said disease tissue or the location and size of said diseased tissue~~.

4. (Currently Amended) The method of claim 1, wherein said therapy comprises at least one of autologous chondrocyte transplantation, osteochondral allografting, osteochondral autografting, tibial corticotomy, femoral or tibial osteotomy, an implant, a replacement material, a scaffold, a regenerating material, and a repair system.

5. (Original) The method of claim 1, wherein said therapy uses cartilage or bone tissue grown ex vivo, stem cells, an artificial non-human material, an agent that stimulates repair of said diseased tissue, or an agent that protects said diseased tissue and that protects adjacent normal tissue.

6. (Currently Amended) The method of claim 1, wherein said information is used to determine the thickness or other geometrical feature of at least one of a tissue transplant, a tissue graft, a tissue implant, a tissue replacement material, a tissue scaffold, ~~or~~ a tissue regenerating material, a ~~or~~ tissue repair system, an implant, a replacement material, a scaffold, a regenerating material, and a repair system.

7. (Currently Amended) The method of claim 1, wherein said image data is obtained using ultrasound, computed tomography, positron emission tomotraphy, a single photon emission computed tomography scan, or MRI.

8. (Currently Amended) The method of claim 7, wherein said information is used to generate a three-dimensional ~~map~~ representation of cartilage thickness or a physical model of said normal or said diseased ~~tissue~~ cartilage or both.

9. (Original) The method of claim 8, wherein said physical model is used to shape a tissue transplant, a tissue graft, a tissue implant, a tissue replacement material, a tissue scaffold or a tissue regenerating material or tissue repair system.

10. (Currently Amended) A method of treating a human with cartilage degeneration in a joint, which method comprises:

obtaining ~~an~~ electronic image data of said joint, ~~wherein said image includes both and diseased cartilage~~;

electronically evaluating said image data to obtain information about a degeneration pattern of the joint, wherein electronically evaluating includes determining three or more points, the points being non-coplanar ~~comprising volume, area, thickness, geometry, biochemical contents or relaxation time of said normal or diseased tissue~~; and

~~selecting~~ determining a therapy to treat or replace said degenerated cartilage based on said information, ~~wherein said information is used during selection of treatment or replacement~~

~~therapy of said degenerated cartilage~~.

11. (Currently Amended) The method of claim 10, wherein said information includes thickness, shape, curvature, volume or location and dimensions of said normal or degenerated cartilage.

12. (Currently Amended) The method of claim 10, wherein said technique to treat or replace said degenerated cartilage is at least one of autologous chondrocyte transplantation, osteochondral allografting, osteochondral autografting, tibial corticotomy, ~~or~~ femoral or tibial osteotomy, an implant, a replacement material, a scaffold, a regenerating material, and a repair system.

13. (Original) The method of claim 10, wherein said treatment or replacement therapy uses cartilage or bone tissue grown ex vivo, stem cells, an artificial non-human material, an agent that stimulates repair of said diseased tissue, or an agent that protects said diseased tissue and that protects adjacent normal tissue.

14. (Original) The method of claim 10 wherein said information is used to determine the thickness, shape, curvature, or location and dimensions of a cartilage transplant, a cartilage graft, a cartilage implant, a cartilage replacement material, a scaffold for cartilage cells or acellular cartilage components or a cartilage regenerating material or a cartilage repair system.

15. (Currently Amended) The method of claim 10, wherein said image data is obtained using ultrasound, computed tomography, positron emission tomography, a single photon emission computed tomography scan, or MRI.

16. (Currently Amended) The method of claim 10, wherein said information is used to generate a three-dimensional ~~map~~ representation of cartilage thickness or a physical model of said normal or said diseased ~~tissue~~ cartilage or both.

17. (Original) The method of claim 16, wherein said physical model is used to shape a cartilage

transplant, a cartilage graft, a cartilage implant, a cartilage replacement material, a scaffold or a cartilage regenerating material or a cartilage repair system.

18. (Original) The method of claim 16, wherein physical model comprises an area of diseased cartilage as well as adjacent normal tissue.

19. (Original) The method of claim 18, wherein said adjacent normal tissue is bone, bone marrow, or normal cartilage.

20. (Original) The method of claim 16, wherein said physical model is created with use of a 3D Euclidian distance transformation.

21. (Original) The method of claim 16, wherein said physical model or a portion of said physical model is implanted into a knee joint.

22. (Original) The method of claim 16, wherein said physical model carries cartilage cells or cartilage matrix.

23-33. (Cancelled)

34. (New) The method of claim 1, wherein said electronic image data provides information on the shape or curvature of bone.

35. (New) The method of claim 1, wherein determining a therapy includes selecting a therapy.

36. (New) The method of claim 1, wherein determining a therapy includes designing a therapy.

37. (New) The method of clam 8, wherein at least a portion of a thickness of said physical model is similar to the thickness of the cartilage adjacent to an area of diseased cartilage.

38. (New) The method of claim 8, wherein at least a portion of a thickness of said physical model is similar to the thickness of normal cartilage.

39. (New) The method of claim 8, wherein at least a portion of said physical model reflects the geometry of a normal outer cartilage surface.

40. (New) The method of claim 8, wherein at least a portion of said physical model reflects the geometry of an inner cartilage surface.

41. (New) The method of claim 8, wherein at least a portion of said physical model reflects the geometry of a diseased cartilage surface.

42. (New) The method of claim 8, wherein at least a portion of said physical model reflects the geometry of the normal cartilage surface.

43. (New) The method of claim 8, wherein at least a portion of said physical model reflects the geometry of the normal and a diseased cartilage surface.

44. (New) The method of claim 8, wherein at least a portion of said model is derived using biomechanical information.

45. (New) The method of claim 44, wherein said biomechanical information includes data on biomechanical axes.

46. (New) The method of claim 8, wherein at least a portion of said model is derived using anatomical information.

47. (New) The method of claim 46, wherein said anatomical information includes data on

anatomic landmarks.

48. (New) The method of claim 1, wherein electronically evaluating includes:

assessing the condition of cartilage in a joint of a human, wherein assessing the condition includes

electronically transferring electronically generated image data of a cartilage of the joint from a transferring device to a receiving device located distant from the transferring device;

receiving the transferred image data at the receiving device;

converting the transferred image data to a degeneration pattern of the cartilage; and transmitting the degeneration pattern to a site for analysis.

49. (New) The method of claim 1, wherein said electronic image data provides information on the location or size of an area of diseased cartilage.

50. (New) A method according to claim 1, wherein the points are located on one or more of a lateral femoral condyle, medial femoral condyle, medial tibial plateau, lateral tibial plateau, the entire tibial plateau, medial patella, lateral patella, the entire patella and an entire joint surface.

51. (New) A method according to claim 4, wherein at least a portion of a thickness of said implant, replacement material, scaffold, regenerating material, or repair system is similar to a thickness of the cartilage adjacent to an area of diseased cartilage.

52. (New) A method according to claim 4, wherein at least a portion of a thickness of said implant, replacement material, scaffold, regenerating material, or repair system is similar to a thickness of normal cartilage.

53. (New) A method according to claim 4, wherein at least a portion of said implant, replacement material, scaffold, regenerating material, or repair system reflects the geometry of

the subchondral bone.

54. (New) A method according to claim 4, wherein said implant, replacement material, scaffold, regenerating material, or repair system reflects the geometry of a normal outer cartilage surface.

55. (New) The method of claim 8, wherein the physical model comprises an area representing diseased cartilage as well as adjacent normal tissue.

56. (New) The method of claim 55, wherein the adjacent normal tissue is at least one of bone, bone marrow, and normal cartilage.

57. (New) The method of claim 8, wherein the physical model comprises an area representing diseased cartilage.

58. (New) The method of claim 8, wherein the physical model comprises an area of normal cartilage.

59. (New) The method of claim 8, wherein the physical model is created with use of a 3D Euclidian distance transform.

60. (New) The method of claim 8, wherein at least a portion of the physical model is implanted into a knee joint.

61. (New) The method of claim 8, wherein the physical model carries cartilage cells or cartilage matrix.

62. (New) The method of claim 10, wherein said information is used to determine the thickness or other geometrical feature of at least one of a tissue transplant, a tissue graft, a tissue implant, a

tissue replacement material, a tissue scaffold, or a tissue regenerating material or tissue repair system, an implant, a replacement material, a scaffold, a regenerating material, and a repair system.

63. (New) The method of claim 10, wherein the points are on at least one of a cartilage or bone surface.

64. (New) The method of claim 10, wherein determining a therapy includes determining a shape of an implant, a cartilage transplant, a cartilage graft, a cartilage replacement material, a scaffold, a cartilage regenerating material, or a cartilage repair system based on the degeneration pattern.

65. (New) The method of claim 64, wherein determining a shape includes selecting a shape of an implant, a cartilage transplant, a cartilage graft, a cartilage replacement material, a scaffold, a cartilage regenerating material, or a cartilage repair system based on the degeneration pattern.

66. (New) The method of claim 65, wherein said implant, cartilage transplant, cartilage graft, implant, cartilage replacement material, scaffold, cartilage regenerating material, or cartilage repair system is also selected and/or designed based on a contact pattern.

67. (New) The method of claim 66, wherein said contact pattern is derived from static alignment.

68. (New) The method of claim 66, wherein said contact pattern is derived from dynamic loading.

69. (New) The method of claim 68, wherein said dynamic loading is estimated for normal gait.

70. (New) The method of claim 66, wherein said contact pattern is derived on an image.

71. (New) The method of claim 66, wherein said contact pattern is derived in three dimensions.

72. (New) The method of claim 64, wherein determining a shape includes designing a shape of an implant, a cartilage transplant, a cartilage graft, a cartilage replacement material, a scaffold, a cartilage regenerating material, or a cartilage repair system based on the degeneration pattern.

73. (New) The method of claim 72, wherein said implant, cartilage transplant, cartilage graft, implant, cartilage replacement material, scaffold, cartilage regenerating material, or cartilage repair system is also selected and/or designed based on a contact pattern.

74. (New) The method of claim 73, wherein said contact pattern is derived from static alignment.

75. (New) The method of claim 73, wherein said contact pattern is derived from dynamic loading.

76. (New) The method of claim 75, wherein said dynamic loading is estimated for normal gait.

77. (New) The method of claim 73, wherein said contact pattern is derived on an image.

78. (New) The method of claim 73, wherein said contact pattern is derived in three dimensions.

79. (New) A method according to claim 10, wherein the points are located on one or more of a lateral femoral condyle, medial femoral condyle, medial tibial plateau, lateral tibial plateau, the entire tibial plateau, medial patella, lateral patella, the entire patella or an entire joint surface.

80. (New) A method according to claim 12, wherein at least a portion of a thickness of said implant, replacement material, scaffold, regenerating material, or repair system is similar to a thickness of the cartilage adjacent to an area of diseased cartilage.

81. (New) A method according to claim 12, wherein at least a portion of a thickness of said implant, replacement material, scaffold, regenerating material, or repair system is similar to a thickness of normal cartilage.

82. (New) A method according to claim 12, wherein at least a portion of said implant, replacement material, scaffold, regenerating material, or repair system reflects the geometry of the subchondral bone.

83. (New) A method according to claim 12 wherein at least a portion of said implant, replacement material, scaffold, regenerating material, or repair system reflects the geometry of a normal outer cartilage surface.

84. (New) A method according to claim 12, wherein at least a portion of said implant, replacement material, scaffold, regenerating material, or repair system reflects the geometry of the inner cartilage surface.

85. (New) The method of claim 16, wherein the physical model comprises an area representing diseased cartilage.

86. (New) The method of claim 16, wherein the physical model comprises an area of normal cartilage.

87. (New) A method of treating a human with joint disease, the method comprising

obtaining electronic image data of a joint;

electronically evaluating said image data to obtain information about the three-dimensional geometry of the joint, wherein electronically evaluating includes determining ro extracting three or more non-coplanar surface points on at least one of a cartilage or subchondral bone surface, the surface points being used to obtain the information on three-dimensional geometry of the joint; and

generating an implant, a cartilage transplant, a cartilage graft, a cartilage implant, a cartilage replacement material, a scaffold, a cartilage regenerating material, or a cartilage repair system based on the three or more non-coplanar surface points; and

implanting the implant, cartilage transplant, cartilage graft, cartilage implant, cartilage replacement material, scaffold, cartilage regenerating material, or cartilage repair system into the subject.

88. (New) A method according to claim 87, wherein the surface points are located on one or more of a lateral femoral condyle, medial femoral condyle, trochlea, medial tibial plateau, lateral tibial plateau, the entire tibial plateau, medial patella, lateral patella, the entire patella or an entire joint surface.

89. (New) A method according to claim 87, wherein at least a portion of a thickness of said implant is similar to a thickness of the cartilage adjacent to an area of diseased cartilage.

90. (New) A method according to claim 87, wherein at least a portion of a thickness of said implant is similar to a thickness of normal cartilage.

91. (New) A method according to claim 87, wherein at least a portion of said implant reflects the geometry of the subchondral bone.

92. (New) A method according to claim 87, wherein at least a portion of said implant reflects the geometry of a normal outer cartilage surface.

93. (New) A method according to claim 87, wherein at least a portion of said implant reflects the geometry of the inner cartilage surface.